

# Metadata Standards for California Information

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## Abstract

This document describes metadata guidelines for the State of California online information. Given the number of state agencies and their diverse programs that will implement California metadata, it is important we have a base set that is responsive not just to the California search engine but that will work well with other search engines and demonstrate California's commitment to the broader Internet community. California bases their metadata on the *Dublin Core*. This document will:

- give guidelines for organizations in creating metadata
- identify metadata extensions specific to California
- describe vocabularies for metadata consistency
- describe how compliant search engines will interpret metadata
- provide supporting informational material

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# Chapter 1

## Overview

DRAFT Version 1.0 of this document is currently under review. Please address comments to the author(s).

These guidelines are designed to facilitate the organization and discovery of on-line resources in the State of California. Included are guidelines for authors of online resources as well as guidelines for search engines, or other indexing entities. These guidelines are intended to offer the broadest range of functionality on the collection of state resources, to the widest range of indexing entities.

Special emphasis is placed on using mark-up schemes that encourage the use of consistent vocabularies within the State of California. The intent of these vocabularies are to allow the maximum functionality to search engines compliant with these guidelines, as well as maintaining a high level of functionality with non-compliant search engines. These vocabularies will rely on the existing URI framework in the state.

Additionally, these guidelines are designed to minimize the authors' burden of mark-up to the minimal functional set.

DRAFT Version 1.0 of this document relates only to the metadata standards for html documents, Hypertext Markup Language - 2.0 (<http://www.ietf.org/rfc/rfc1866.txt>) through HTML 4.01 Specification (<http://www.w3.org/TR/html4/>), with special consideration to version 4.0. These guidelines also pertain to HTML[tm] 1.0: The Extensible HyperText Markup Language (<http://www.w3.org/TR/xhtml1/>), however the examples are all given in html, and would need slight modification for xhtml. The examples generally follows the conventions of lower case for tag names and attributes, attribute values quoting, etc. They do not include the explicit marker /> for empty tags.

Further, only the syntax of embedding Metadata in html <meta> tags is discussed. Alternative syntax, such as the Resource Description Framework (RDF) (<http://www.w3.org/rdf>) are not discussed. For version DRAFT Version 1.0, alternative syntax implies a non-conformant document. Further revisions of this document will extend these guidelines to alternate syntaxes, to allow consistent documentation of images, audio, etc.

'HTML Metadata Guidelines' on page 3 provides all the guidelines for authors and indexers of resources. Appendices provide additional information. When used in this specification, authors implies any entity re-

sponsible for the creation and maintenance of HTML documents representing California State activities, indexers include any entity which organizes, indexes, provides search capabilities for, or otherwise coordinates California resources.

## Chapter 2

# HTML Metadata Guidelines

The State of California will adopt the Dublin Core (<http://www.dublincore.org/>) standards for metadata representation of on-line documents. Dublin Core Metadata Element Set, Version 1.1: Reference Description (<http://dublincore.org/documents/1999/07/02/dces/>) provides a description of the included metadata elements. Version DRAFT Version 1.0 of these guidelines will follow the syntax specified in Encoding Dublin Core Metadata in HTML (<http://www.ietf.org/rfc/rfc2731.txt>) and the DCMI working draft Recording qualified Dublin Core metadata in HTML meta elements (<http://dublincore.org/documents/2000/08/15/dcq-html/>). Any guideline expressed in this document at variance with the above standards should be considered erroneous.

The *Dublin Core* includes fifteen metadata elements: Title, Creator, Subject, Description, Publisher, Contributor, Date, Type, Format, Identifier, Source, Language, Relation, Coverage and Rights. There are multiple methods of describing these elements within an HTML document including <meta> and <link> tags, and other HTML parameters. <meta> tags for these elements may be simple text entries, or refined further with qualifications, and schemes as defined in Dublin Core Qualifiers (<http://dublincore.org/documents/2000/07/11/dcmes-qualifiers/>) All elements may be repeated. Additionally, multiple languages may be supported with multiple elements.

Authors must include at least the Title, Creator, Subject, and Description for the resource. Authors must use the *uri-fields* scheme in the Creator <meta> tag to identify state organizations responsible for creation of the resource. Authors should identify at least one Subject using the *uri-fields* scheme. Authors should include additional elements to adequately describe resources intended to further State activities.

Indexers must properly recognize the Title, Creator, Subject, and Description elements for the resource. Indexers must correctly parse and normalize the *uri-fields* scheme in any <meta> tag using that scheme. Indexers should allow differentiating of resources by categories identified in the Creator, Subject, and other elements, via the *uri-fields* scheme.

The State of California encourages the use of schemes as defined in Dublin Core Qualifiers (<http://dublincore.org/documents/2000/07/11/dcmes-qualifiers/>) In addition, the State of California identifies a scheme *uri-fields* which will be the standard scheme for controlled vocabularies. The

*uri-fields* scheme is described completely in ‘The *uri-fields* scheme’ on page 21, simply defined, it is a scheme that allows multiple, comma-separated URIs referenced in a single element, each with an optional phrase (readable label) and/or comment. The format is similar to that found in email addresses.

For all elements Indexers must correctly parse the *uri-fields* scheme; must normalize the provided URI; and must index the document on that normalized URI.

Indexers must correctly parse the following schemes, as identified in Dublin Core Qualifiers (<http://dublincore.org/documents/2000/07/11/dcme-s-qualifiers/>): DCSV,W3C-DTF,DCMI-Period (as encoded with DCSV), URI, RFC 1766, DCMI Point, DCMI Box.

The following sections describe each metadata element, and guidelines for their implementation specifically for HTML documents.

Many examples are given in the following sections. For brevity and readability, examples are often only parts of a complete HTML <head> section, or even single tags. The following example contains a template HTML document, implicit in most of the following examples.

```
<!DOCTYPE HTML PUBLIC '-//W3C//DTD HTML 4.01//EN'
  'http://www.w3.org/TR/html4/strict.dtd'
<html>
  <head>
    <title>Important Manual -- Section 9</title>

    <link rel='schema.DC'
      href='http://purl.org/dc/elements/1.1'
      title='The Dublin Core Metadata Element Set'>

    <link rel='Start' title='Manual of Importance'
      href='http://department.ca.gov/important-manual'>

    <!-- Specific <link> and <meta> tags here -->

  </head>
  <body></body>
</html>
```

The example identifies one <link> requirement for resources. When <meta> tags are used to identify an element, the resource must include a <link> element identifying the schema(s) used. Because authors may use *Dublin Core* qualifications, the link to <http://purl.org/dc/elements/1.1> (<http://purl.org/dc/elements/1.1/>) is preferred.

```
<link rel='schema.DC'
```

```
href='http://purl.org/dc/elements/1.1'  
title='The Dublin Core Metadata Element Set'>
```

## 2.1 Title

All conformant documents must include a title. The title identifies the document, and is included in summaries of the document. The title should be rich in content information. In collections of documents, the title should contain more descriptive information than may be in the displayed header of an individual section. Indexers must include the title of all summaries of a resource.

The best practice for identifying the title in HTML documents is through the <title> tag.

```
<title>Important Manual -- Section 9</title>
```

Additional titles may be identified with <meta name='DC.Title'...> tag.

```
<meta name='DC.Title'  
content='Alternate Title'>
```

Indexers must represent the <title> tag, as if the authors included an equivalent <meta name='DC.Title'...> tag.

## 2.2 Creator

The State of California anticipates that indexers will use creator element as one of the major methods for organizing documents. The creator element should identify the relevant state organization(s) that created the resource. Specifically, creator should specify what program, department, and/or agency a created a specific document where appropriate.

The creator element requires a controlled vocabulary. To eliminate lists of these organizational structures, these guidelines use existing URIs (usually, HTTP URLs) as a basis for controlling the values of creator. Some <meta name='DC.Creator'...> tags; must use the *uri-fields* scheme for identification of creators. State organizations need to provide guidance to their constituents as to the proper URIs to use.

Authors must include a <meta name='DC.Creator'...> tag in the *uri-fields* scheme. Authors should include as many relevant <meta name='DC.Creator'...> tags as necessary to accurately identify the organizational structure administering the document.

The identifier for the State of California is <http://www.ca.gov/>. A <meta name='DC.Creator'...> tag for the State of California is:

```
< meta name='DC.Creator' scheme='uri-fields'  
content='California <http://www.ca.gov/>'>
```

Authors may choose to include a phrase in their <meta name='DC.Creator'...> tags or not. The general rule is to include a phrase if it is a good descriptive phrase for the resource. Generally, generic phrases (eg. Agency level) can be removed. Authors should try to be consistent in phrases within their resources. Authors should not include lists of aliases in a phrase. ‘Guidelines for Creator Resources’ on page 15 includes more specific guidelines for HTML documents that are represented as creators. Authors should identify individuals, by name or position using the same *uri-fields* scheme usually using a mailto: URI.

The following example identifies four specific entities responsible for a resource.

```
< meta name='DC.Creator'  
scheme='uri-fields'  
content='California <http://www.ca.gov/>'>  
  
<meta name='DC.Creator'  
scheme='uri-fields'  
content='Resources Agency of California, Office of the Secretary'  
<http://resources.ca.gov/>'>  
  
<meta name='DC.Creator'  
scheme='uri-fields'  
content='California Environmental Resources Evaluation System  
<http://ceres.ca.gov/>'>  
  
<meta name='DC.Creator'  
scheme='uri-fields'  
content='Webmaster <mailto:webmaster@ceres.ca.gov>'>
```

Using the multiple references in the *uri-fields* scheme; and removing generic phrases, the above example could be rewritten as:

```
<meta name='DC.Creator'  
scheme='uri-fields'  
content='California Environmental Resources Evaluation System  
<http://ceres.ca.gov/>,  
mailto:webmaster@ceres.ca.gov,  
http://resources.ca.gov/, http://www.ca.gov/'>
```

Another example shows a resource where the program is documented within another web site.

```
<meta name='DC.Creator'  
      scheme='uri-fields'  
      content='Colorado River Board of California  
              <http://ceres.ca.gov/crb/>,  
              http://resources.ca.gov/, http://www.ca.gov/'>
```

## 2.3 Subject

Authors should identify at least one Subject in the *uri-fields* scheme. State of California Vocabularies (<http://library.ca.gov/vocabularies>) contains a partial list of vocabularies used in State documents. Authors should identify one category identified by California Portal Categories (<http://library.ca.gov/portal/categories>). Authors should use alternate vocabularies where appropriate.

Authors should use `<meta name='DC.Subject'...>` tags without an identified scheme to included uncontrolled keywords. Authors may used other schemes, like those defined in Dublin Core Qualifiers (<http://dublincore.org/documents/2000/07/11/dcterms-qualifiers/>)

This example shows multiple subject identifiers; one portal category, several themes from CERES Themes (<http://ceres.ca.gov/theme>) and several uncontrolled keywords. Note that portal category phrase was too general to include as a guide to non-compliant indexes.

```
<meta name='DC.Subject' scheme='uri-fields'  
      content='http://library.ca.gov/portal/categories#environment'>  
  
<meta name='DC.Subject' scheme='uri-fields'  
      content='Wildfires <http://ceres.ca.gov/theme?wildfires>,  
              Forest Management <http://ceres.ca.gov/theme?forest\_management>'>  
  
<meta name='DC.Subject' content='forest stewardship'>
```

Authors may wish to include synonymns in uncontrolled `<meta name='DC.Subject'...>` tags, but should not include synonyms in controlled `<meta name='DC.Subject'...>` tags.

### 2.3.1 Portal Category

Authors must identify one category identified by California Portal Categories (<http://library.ca.gov/portal/categories>), which describes the possible portal choices. Identifying portal categories requires an additional link to the State of California specific metadata scheme.

```
<link rel='schema.CA'  
      href='http://www.ca.gov/elements/1.0'  
      title='The California Metadata Element Set'>  
  
<meta name='CA.portal' content='Health and Safety'>
```

## 2.4 Description

No special schemes identified for this tag. Give an account of the content of the resource. Authors must include a <meta name='DC.Description'...> tag. Indexers must include the <meta name='DC.Description'...> tag in non-brief summaries of the resource.

```
<meta name='DC.Description'  
      content='Section 9 of Important Manual deals with this.'>
```

## 2.5 Publisher

This tag may be used without an explicit scheme. The *uri-fields* scheme may be used in this tag. Authors may identify the entity making the resource available. In terms of identifying the state organization responsible for a document, the State of California uses 'Creator' on page 5 in preference to the Publisher. It is not required to identify the publisher of an on-line document that is reasonably identified in the Creator element(s) of the resource.

```
<meta name='DC.Publisher'  
      content='University of California, Davis'>
```

or

```
<meta name='DC.Publisher' scheme='uri-fields'  
      content='University of California, Davis  
<http://www.ucdavis.edu>'>
```

## 2.6 Contributor

This tag identifies other contributing entities to the resource.

The *uri-fields* scheme may be used in this tag. When the contributor is another state government organization, authors must use the *uri-fields* as in ‘Creator’ on page 5.

This tag may be used without an explicit scheme.. For other contributors, authors may include a descriptive name. Authors may use the *uri-fields* scheme with other contributors.

```
<!-- State Government Agency -->
<meta name='DC.Contributor' scheme='uri-fields'
      content='http://ceres.ca.gov/'>

<!-- This tag is for a non-state contributor -->
<meta name='DC.Contributor'
      content='The Nature Company'>

<!-- Although you MAY use the uri-fields scheme -->
<meta name='DC.Contributor' scheme='uri-fields'
      content='Ducks Unlimited
              <http://www.ducksunlimited.org/>'>
```

## 2.7 Date

The date element associates times, or time periods with resources. The State of California encourages the qualifiers identified in Dublin Core Qualifiers (<http://dublincore.org/documents/2000/07/11/dcme-s-qualifiers/>), for the Date element. Authors should use the schemes specified in Dublin Core Qualifiers (<http://dublincore.org/documents/2000/07/11/dcme-s-qualifiers/>).

```
<meta name='DC.Date.Issued' scheme='W3CDTF'
      content='2001-07-01'>

<meta name='DC.Date.Valid' scheme='DCSV'
      content='name:Fiscal Year 2001;start:2001-07-01;end:2002-07-01'>
```

Indexers must parse qualifiers and schemes identified in Dublin Core Qualifiers (<http://dublincore.org/documents/2000/07/11/dcme-s-qualifiers/>) for the Date element.

## 2.8 Type

Authors may identify the nature of the content of the resource with the DC.Type element. Authors may use the scheme identified in the Dublin Core Qualifiers (<http://dublincore.org/documents/2000/07/11/dcmeta-qualifiers/>)

```
<meta name='DC.Type' scheme='DCMType'
      content='text'>
```

## 2.9 Format

Although authors may use this element, since most on-line documents are retrieved via HTTP negotiation, which identifies the document's MIME type, authors may instead rely on this mechanism.

## 2.10 Identifier

Authors may use the DC.Identifier tag to associate unambiguous reference to the resource. Authors should use locally defined identifiers if it helps them manage the document. Authors may extend the *uri-fields* scheme to a local URL space, if it helps manage their resources. Authors are not required to include a DC.Identifier element to match the online location(s) where the resource is discovered.

Search Engines should associate the resource metadata to all identifiers, and may give preference to the contents of the DC.Identifier elements.

```
<!DOCTYPE HTML PUBLIC '-//W3C//DTD HTML 4.01//EN'
               'http://www.w3.org/TR/html4/strict.dtd'
<html>
<head>
  <title>Important Manual -- Section 9</title>

  <link rel='schema.DC'
        href='http://purl.org/dc/elements/1.1'
        title='The Dublin Core Metadata Element Set'>

  <meta name='DC.Identifier' scheme='URI'
        content='http://department.ca.gov/manual/section9'>
</head>
```

## 2.11 Source

No special schemes identified for this tag. Authors may use this element to identify the source of the resource. If the source is the more definitive representation of the resource, in a different format for example, Authors should use the <link> elements HTML to represent that relationship. Authors should not replicate those relationships with DC.Source tags.

```
<!DOCTYPE HTML PUBLIC '-//W3C//DTD HTML 4.01//EN'
  'http://www.w3.org/TR/html4/strict.dtd'
<html>
<head>
  <title>Important Manual -- Section 9</title>

  <link rel='schema.DC'
    href='http://purl.org/dc/elements/1.1'
    title='The Dublin Core Metadata Element Set'>

  <meta name='DC.Source'
    content=' '>
</head>
```

## 2.12 language

Although authors may use this element, Authors can instead rely on any *lang* attributes in the HTML document itself, when the HTML version supports this attribute. This is a finer grained approach regarding language. An example using the HTML method is:

```
<!DOCTYPE HTML PUBLIC '-//W3C//DTD HTML 4.01//EN'
  'http://www.w3.org/TR/html4/strict.dtd'
<html lang='en-US'>
<head>
  ...
</head>
```

Search Engines should consider

```
<html
  lang='en-US'>
```

equivalent to

```
<DC.Language scheme='RFC1766'  
content='en-US'>
```

, and similarly with all language codes.

## 2.13 Relation

The relation element allows general references to related resources. The HTML `<link>` element provides a variety of information to search engines. Link elements can point to alternate versions of documents, either in different languages or in different media. Links can also identify the previous, next, or starting location of a set of documents. Authors should use `<link>` tags in preference to `<meta name='DC.Relation'...>` tags when appropriate see HTML 4.01 Specification (<http://www.w3.org/TR/html4/>) for more information on using links.

Conformant documents should ensure that an appropriate `<link>` tag is identified for documents that are part of collection. The following example identifies the front page for a collection of documents.

```
<title>Important Manual -- Section 9</title>  
<link rel='Start' title='Manual of Importance'  
href='http://department.ca.gov/important-manual'>
```

The following example is a more complete example of using the `<link>` element. This example identifies a preferred print copy a manual, pointers to the previous, next and index sections, and indication of Spanish language version:

```
<title>Important Manual -- Section 9</title>  
<link  
type='application/postscript'  
media='print'  
rel='alternate'  
href='../../important-manual.ps'>  
  
<link rel='Prev' title='Importance Manual -- Section 8'  
href='../../important-manual/section8/'>  
  
<link rel='Next' title='Importance Manual -- Section 10'  
href='../../important-manual/section10/'>
```

```
<link rel='Index' title='Manual of Importance -- Index'
      href='../../important-manual/toc/'>

<link rel='Start' title='Manual of Importance'
      href='http://department.ca.gov/important-manual'>

<link title='Spanish Version'
      type='text/html'
      rel='alternate'
      hreflang='sp'
      href='../../important-manual/section9/index.html.sp'>
```

Indexers must ensure that resources <link> tags are made equivalent to <meta name='DC.Relation'...> tags, where the qualifier is identified as a joining of the 'link' with the content of the <link> rel tag. The scheme is *uri-fields* using the title attribute as the phrase and the href attribute as the URI. The <link> hreflang attribute, should be mapped to the <meta> lang attribute.

```
<link rel='Start' title='Manual of Importance'
      href='http://department.ca.gov/important-manual'>

<link title='Spanish Version'
      type='text/html'
      rel='alternate'
      hreflang='sp'
      href='../../important-manual/section9/index.html.sp'>
```

is equivalent to:

```
<meta name='DC.Relation.link.Start' scheme='uri-fields'
      content='Manual of Importance
              <http://department.ca.gov/important-manual>'>

<meta name='DC.Relation.link.alternate' scheme='uri-fields'
      lang='sp'
      content='Spanish Version
              <../../important-manual/section9/index.html.sp>'>
```

Authors may use the <meta name='DC.Relation'...> to identify additional relationships between this resource and others. Authors are encouraged to use the qualifiers identified in Dublin Core Qualifiers ([http:](http://)

//dublincore.org/documents/2000/07/11/dcmes-qualifiers/). Authors should use the *uri-fields* scheme when appropriate. Authors should not repeat relations identified with <link> tags.

```
<meta name='DC.Relation.Replaces' scheme='uri-fields'  
      content='Previous Manual <http://department.ca.gov/manual/1999/>'>
```

Indexers should expose resource relations in extended summaries of the resource. Indexers should identify the start of a collection of documents in brief summaries of the resource.

## 2.14 Coverage

Authors may use <meta name='DC.Coverage'...> to identify the scope or extent of the resource. Extent can be a time or time period, a spatial location, or jurisdiction. Authors are encouraged to use the qualifiers identified in Dublin Core Qualifiers (<http://dublincore.org/documents/2000/07/11/dcmes-qualifiers/>).

```
<meta name='DC.Coverage.Spatial' scheme='DCSV'  
      content='name:California Motherlode;  
              westlimit:-121.0;southlimit:37.6;  
              eastlimit:-119.4;northlimit:39'>
```

## 2.15 Rights

Authors may use the <meta name='DC.Rights'...> tag to identify information like copyrights, intellectual property rights, and other rights regarding a resource. No special schemes identified for this tag.

```
<meta name='DC.Rights'  
      content='Copyright (C) California State Library (2001)'>
```

## Chapter 3

# Guidelines for Creator Resources

If the resource is used as a DC.Creator element as described in ‘Creator’ on page 5 the author must use the DC.Type element to describe the nature of the entity in its role as a creator. This identify is defined using the *uri-fields* scheme. The content of the element must be a reference with a base Definitions of California Entities (<http://library.ca.gov/entities>). This allows search engines to unambiguously determine the role of DC.Creator’s within the state.

```
<html>
<head>
    <title>Important Manual -- Section 9</title>

    <link rel='schema.DC'
        href='http://purl.org/dc/elements/1.1'
        title='The Dublin Core Metadata Element Set'>

    <meta name='DC.Type' scheme='uri-fields'
        content='California Agency <http://library.ca.gov/entities#agency>'>
</head>
```



## Appendix A

# Examples

The following example demonstrates the syntax of the metadata standards for most of the metadata described above. This example includes only the minimum requirements.

```
<!DOCTYPE HTML PUBLIC '-//W3C//DTD HTML 4.01//EN'
  'http://www.w3.org/TR/html4/strict.dtd'
<html lang='en-US'>
  <head>
    <title>Metadata Standards for California Information</title>

    <link rel='schema.DC'
      href='http://purl.org/dc/elements/1.1'
      title='The Dublin Core Metadata Element Set'>

    <meta name='DC.Creator'
      scheme='uri-fields'
      content='Quinn Hart <qjhart@ucdavis.edu>,
      California Environmental Resources Evaluation System
      <http://ceres.ca.gov/>,
      http://resources.ca.gov/, http://www.ca.gov/'>

    <meta name='DC.Creator'
      scheme='uri-fields'
      content='Kristine Ogilvie <kogilvie@library.ca.gov>,
      California State Library <http://www.library.ca.gov/>,
      http://www.ca.gov/'>

    <meta name='DC.Description'
```

```
content='This document describes metadata
guidelines for the State of California online information.
This document will: give guidelines for
organizations in creating metadata, identify
metadata extensions specific to California,
describe vocabularies for metadata consistency,
describe how search engines should interpret
metadata, provide supporting informational
material'>

<meta name='DC.Subject' scheme='uri-fields'
      content='http://library.ca.gov/portal/categories#environment'>

</head>
<body></body>
</html>
```

This example is more elaborate:

```
<!DOCTYPE HTML PUBLIC '-//W3C//DTD HTML 4.01//EN'
             'http://www.w3.org/TR/html4/strict.dtd'
<html lang='en-US'>
  <head>
    <title>Metadata Standards for California Information</title>

    <link rel='schema.DC'
          href='http://purl.org/dc/elements/1.1'
          title='The Dublin Core Metadata Element Set'>

    <meta name='DC.Creator'
          scheme='uri-fields'
          content='Quinn Hart <qjhart@ucdavis.edu>,
California Environmental Resources Evaluation System
<http://ceres.ca.gov/>,
http://resources.ca.gov/, http://www.ca.gov/'>

    <meta name='DC.Creator'
          scheme='uri-fields'
          content='Kristine Ogilvie <kogilvie@library.ca.gov>,
California State Library <http://www.library.ca.gov/>,
http://www.ca.gov/'>
```

```
<meta name='DC.Description'  
      content='This document describes metadata  
      guidelines for the State of California online information.  
      This document will: give guidelines for  
      organizations in creating metadata, identify  
      metadata extensions specific to California,  
      describe vocabularies for metadata consistency,  
      describe how search engines should interpret  
      metadata, provide supporting informational  
      material'>  
  
<meta name='DC.Rights'  
      content='Copyright (C) The California State Library (2001)'>  
  
<meta name='DC.Title'  
      content='Alternate Title'>  
  
<meta name='DC.Subject' scheme='uri-fields'  
      content='http://library.ca.gov/portal/categories#environment'>  
  
<meta name='DC.Subject' scheme='uri-fields'  
      content='Wildfires <http://ceres.ca.gov/theme?wildfires>,  
      Forest Management <http://ceres.ca.gov/theme?forest_management'>  
  
<meta name='DC.Subject' content='forest stewardship'>  
  
<meta name='DC.Contributor' scheme='uri-fields'  
      content='http://ceres.ca.gov/'>  
  
<meta name='DC.Date.Issued' scheme='W3CDTF'  
      content='2001-07-01'>  
  
<meta name='DC.Date.Valid' scheme='DCSV'  
      content='name:Fiscal Year 2001;start:2001-07-01;end:2002-07-  
      01'>  
  
<meta name='DC.Type' scheme='DCMIType'  
      content='text'>  
  
</head>  
<body></body>  
</html>
```



## Appendix B

### The uri-fields scheme

The State of California will use the *scheme* mechanism of the *Dublin Core* specification, when it is desirable to limit the scope of values to a specific domain. The *scheme* mechanism is an indicator of the use of a controlled vocabulary or formatting convention on the element set. State of California will use the single consistent scheme *uri-fields* which indicates a URI reference, optionally including a readable label. The format of this field follows the syntax of the Internet Message Format (`ftp://ftp.isi.edu/in-notes/rfc2822.txt`) address specification, replacing the 'add-spec' with a URI conforming to Uniform Resource Identifiers (URI): Generic Syntax (`ftp://ftp.isi.edu/in-notes/rfc2396.txt`).

This scheme will give metadata creators flexibility in reusing existing URIs, allowing multiple vocabularies, and extending the scheme to local domains. Additionally, a mechanism for discovering more information regarding the value of the <meta> element can be embedded directly in the tag.

Examples include: `mailto:webmaster@ca.gov`, with an optional phrase `State Webmasters <mailto:webmaster@ca.gov>`. HTTP documents might look like: `http://www.ca.gov/page.html` or "Phrase, has comma" `<http://www.ca.gov/page.html>`. Multiple entries would be: `http://www.ca.gov/page.html, State Webmasters <mailto:webmasters@ca.gov>, "Phrase, with commas" <http://www.ca.gov/another-page.html>`.